STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
Northwest Regional Office, 3190 - 160th Ave S.E. • Bellevue, Washington 98008-5452 • (206) 649-7000

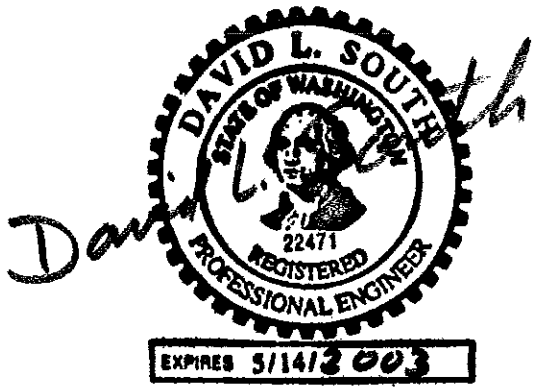
Professional Engineer's Statement
Everett Smelter Cleanup, 2000-2001

Sampling and soil remediation were carried out at the following homes within the Everett Smelter Site during the years 2000 and 2001:

Address	Owner
Muriel Jones	110 Bridgeway
Andrew Michels	235 Bridgeway
Jeanette Mempa	236 Bridgeway
Thomas, Christine & Ronnie	240 Bridgeway
Martha Watkins	244 Bridgeway
Joanne Felmer	2803 Medora Way
Terry Tavares & Linda Guy-Tavares	2811 Medora Way
Duane & Edna Rapelje	2817 Medora Way
Dave & Rene Goodrich	2818 Medora Way
Ron & Bonnie Sylvester	2830 Medora Way
Anh Black	528 Hawthorne
Steve & Sherrie Wamba	415 Legion Drive
Gary & Darlene Bunger & Sandra Kane	112 Skyline Drive
Michael Paeth	116 Skyline Drive
Randy Hall	212 Skyline Drive
Willy Pompey	215 Skyline Drive
Dorothy Larson	218 Skyline Drive
Bob & Peggy Redline	221 Skyline Drive
Michael & Sheila Crehan	222 Skyline Drive
Kurt Bertilson	230 Skyline Drive
Louise Hiller	302 Skyline Drive
Margie Hogle	303 Skyline Drive
Fred Brown	307 Skyline Drive
Jackie Robinett	308 Skyline Drive
Al Vandenbosch	316 Skyline Drive
Al Sorenson	320 Skyline Drive
Jo Newland	323 Skyline Drive
John & Christina Bull	328 Skyline Drive

Based on the results of testing and inspections, it is my opinion that the soil remediation carried out at these homes was performed in substantial compliance with the plans, specifications, and related documents governing the work.

Remediation work remaining to be done at these homes includes evaluation of crawl space data and addressing crawl spaces as necessary and carpet and duct cleaning. Some plant replacement also remains to be done and will be done this Spring.



Washington Department of Ecology
Everett Smelter Site
2000 - 2001 Cleanup

Details of Cleanup Activities

The Department of Ecology (Ecology) targeted the yards of 28 homes within the Everett Smelter Site for cleanup in 2000 and 2001. Cleanup activities were conducted between August 2000 and March 2001, and again between July and November, 2001. The cleanup was conducted according to the *Everett Smelter Site: Integrated Final Cleanup Action Plan and Final Environmental Impact Statement for the Upland Area.*

This report describes the cleanup actions that were conducted, what arsenic-contaminated soil was not removed and where it remains for the following location:

Property Owner Michael & Amy Paeth

Address: 116 Skyline Drive
Everett, WA 98201

Snohomish County
State of Washington
Tax Parcel No. # 005203-000-004-00

This property was divided by Ecology into four Decision Units, A, B, C and D, as shown on the attached map, for purposes of pre-cleanup sampling and decision-making regarding the depth to which excavation was required. The following is a summary of the work done in the remediation of the property within each of the decision units.

Decision Unit: A

Results of pre-cleanup sampling indicated 30 inches of soil were to be excavated from within this decision unit. Attachment B shows that below 30 inches, results of composite sample analyses are below the remediation level of 150 parts per million (ppm). However, because the soil below 30 inches contains arsenic levels above the cleanup level of 20 ppm, a geofabric marker was placed.

Field measurements by the Ecology on-site coordinator confirmed that soil was removed to a depth of 30 inches. In order to facilitate excavation, the split-rail fencing was removed for the duration of the cleanup. The stairs from the lower front yard (Decision Unit A) to the upper front yard (Decision Unit B) through the grape arbor were not removed. At the owners' request, the large boulder in the southeast corner of the property was not removed. The excavation was sloped approximately 1:1 away from the sides of the stairs to protect the integrity of the structure and from the rock to maintain it in place. French drains were installed in three locations. The first, along the southern edge of the driveway, runs from approximately the base of the rock wall (near sampling location L-3) to Skyline Drive. This is connected to a PVC pipe which runs north under the driveway to the second French drain located on the east (street) side of the fence posts. The third French drain is approximately parallel to and west of the fence. All three drains discharge to the catch basin located in the northeast corner of the property near Skyline Drive. At the southeastern corner, the plastic pipe discharging to Skyline Drive replaces the original pipe, which was damaged during excavation. The pipe was reconnected to the drainage from 206 Skyline Drive and the French drain which runs along the base of the rockery. After placing a geofabric marker, the Decision Unit was backfilled with clean material, as described in the *Specifications for Everett Residential Soil Remediation*. The driveway was backfilled with clean material and topped with approximately 4 inches of compacted crushed rock. After placing the topsoil, sod and shrubs were planted. The fence was restored to its original locations except where the owner requested the fence not be restored.

Decision Unit: B

Results of pre-cleanup sampling indicated 30 inches of soil were to be excavated from within this decision unit. Attachment B shows that below 30 inches, results of composite sample analyses are below the remediation level of 150 ppm. However, because the soil below 30 inches contains arsenic levels above the cleanup level of 20 ppm, a geofabric marker was placed.

Field measurements by the Ecology on-site coordinator confirmed that soil was removed to a depth of 30 inches. Along the side of the existing home, the front stairs and the walkway along the south side of the house, the excavation was sloped approximately 1:1 away from the foundations to protect the integrity of the structures. The grape arbor was not removed. The soils on the slope along the south property line were removed to a depth of only 12 inches to prevent damage to the adjoining property. The downspout on the southeast corner of the house was re-connected to the perforated drain pipe running along the base of the rockery along the southern property line. The sewer line from the house was damaged during excavation. The broken section was replaced with plastic sewer pipe, including a cleanout. After placing a geofabric marker, the Decision Unit was backfilled with clean material, as described in the *Specifications for Everett Residential Soil Remediation*. After placing the topsoil, sod and shrubs were planted.

Decision Unit C:

Results of pre-cleanup sampling indicated 12 inches of soil were to be excavated from within this decision unit. Attachment B shows that below 12 inches, results of composite sample analyses are below the remediation level of 60 ppm and discrete sample analyses are below the remediation level of 150 ppm. However, because the soil below 12 inches contains arsenic levels above the cleanup level of 20 ppm, a geofabric marker was placed.

Field measurements by the Ecology on-site coordinator confirmed that soil was removed to a depth of 12 inches. The concrete patio, all walkways and the sport court were not removed. Along the sides of the existing home, the concrete patio, all walkways and the sport court, the excavation was sloped approximately 1:1 away from the foundations to protect the integrity of the structures. A rockery wall was placed at the base of the slope along the southern property line to allow restoration as closely as possible to the original grade and to prevent backfill material from sloughing off the slopes. The pre-existing French drain, now running along the base of rockery was left in place. At the request of the owner, the holly tree at the northwest corner of the yard was not removed. Within the northern half of the planting bed containing the tree, the existing soil was removed to the top of the root ball and backfilled with topsoil. The portion of the Decision Unit north of the holly tree and the concrete walkway consists of a small rockery at the top of a steep slope ending at the gravel driveway of 112 Skyline Drive. The concrete walkway and the rockery were not removed. Soils below the rockery were excavated to a depth of 12 inches. After placing a geofabric marker, the Decision Unit was backfilled with clean material, as described in the *Specifications for Everett Residential Soil Remediation*. The driveway and parking area were finished with between 4 to 6 inches of crushed rock and compacted. After placing the topsoil in the rest of the Decision Unit, sod and shrubs were planted.

Decision Unit: D

Results of pre-cleanup sampling indicated 12 inches of soil were to be excavated from within this decision unit. Attachment B shows that below 12 inches, results of composite sample analyses are below the remediation levels of 60 parts per million (ppm), and discrete sample analyses are below the remediation level of 150 ppm. However, because the soil below 12 inches contains arsenic levels above the cleanup level of 20 ppm, a geofabric marker was placed.

Field measurements by the Ecology on-site coordinator confirmed that soil was removed to a depth of 12 inches. Along the sides of the concrete slab for the storage shed in the northwest corner of the property and the paved walkway, the excavation was sloped approximately 0.5:1 away from the foundations to protect the integrity of the structures. The gazebo in the southwest corner of the property, at the top of the slide, was moved to the sport court for the duration of the cleanup. Before the gazebo was returned to its original location, the area was backfilled with crushed rock and compacted. The slide and stairs were not removed. Soils on either side of the stairs were excavated to the underlying fill. A rockery wall was placed along the base of the Decision Unit to restore

the original grade as closely as possible and to prevent backfill material from sloughing. The French drain at the base of the original slope was extended north to the bottom of the paved walkway leading to the storage shed. In the northwest corner of the property, exposed soil was removed to a depth of 12 inches between the base of the cinder block compost bin and the top of the rock wall on the north property line. The area north and west of the compost bin was not removed. After placing a geofabric marker, the Decision Unit was backfilled with clean material, as described in the *Specifications for Everett Residential Soil Remediation.*

January 9, 2002

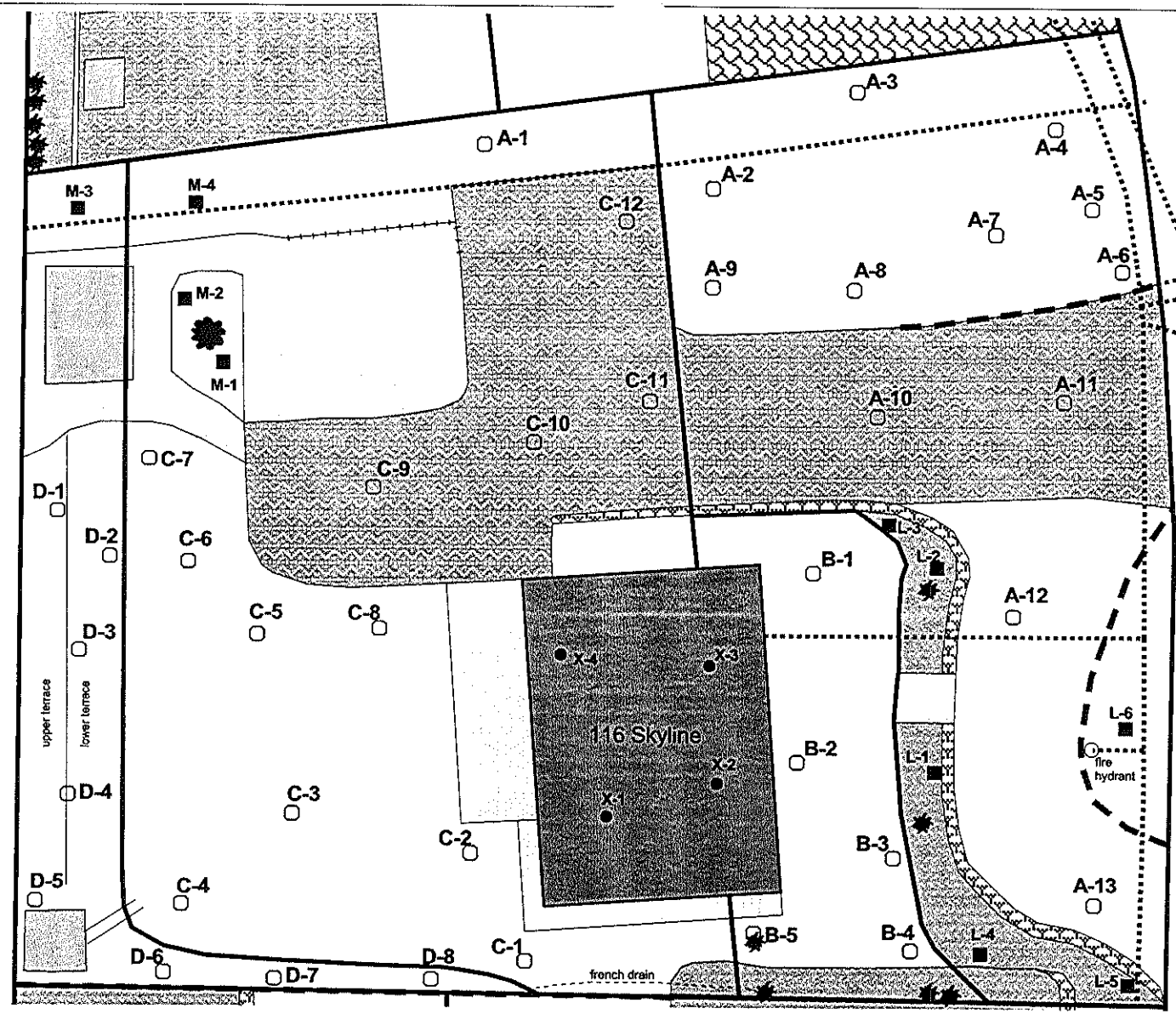
Dan Cargill
Washington Department of Ecology

DRC:dc

Attachments: A. Site Map
B. Graphs of Arsenic Concentration vs. Depth
C. Explanation of graphs

Note: If the attachments listed above do not accompany this document, copies may be obtained from Ecology. Please contact Central Records at Ecology's Northwest Regional Office (NWRO), at (425) 649-7190 for information on obtaining copies.

cc: Ecology Central Files, NWRO
Office of the Attorney General
Snohomish Health District
City of Everett Public Works
Everett Public Library
Snohomish PUD
Northeast Everett Community Organization
Northwest Everett Neighborhood Association
Asarco Information Center, Everett



116 Skyline (Home 038)

Everett Smelter Homesite Cleanup

Source of Basemap: Snohomish Health District

- Crawlspace Samples
- Landscape Samples
- DU Samples

N

Not to scale

SAIC
Science Applications International Corporation